Application No. 10/644,173   3COM 2035-3
                                                         (2305.US.P.CON2)

In the claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) For a network comprising a plurality of local area network LAN segments interconnected by a plurality of protocol entities, a protocol entity comprising:

a plurality of ports coupled to LAN segments in the network;

topology management resources which manage the plurality of ports according to a spanning tree algorithm, to set an active topology for the plurality of ports based on configuration information stored in the protocol entity, wherein the topology management resources comprise:

logic to compute configuration information in response to acceptance of configuration messages, the configuration information including an identification of a protocol entity in the network as a root of the network, an identification of a port in the plurality of ports for a root port role to be used for a preferred path to the root, and an identification of one or more ports in the plurality of ports for designated port roles to be used for preferred paths between the root and respective LAN segments in the plurality of LAN segments coupled to the one or more ports;

logic to compute states for ports in the plurality of ports in response to the configuration information parameters, including placing the port providing the root port role in a forwarding state, placing the one or more ports providing the designated port roles in a forwarding state, and placing other ports in a blocking state; and

logic to accept configuration messages carrying topology information on a particular port, in response to a determination that the configuration message is received from a port on a neighboring protocol entity identified as the designated port for the particular port.

2. (original) The network device of claim 1, including logic to expire and recompute the configuration information for the plurality of ports in response to detection of failure of a link coupled to a particular port in the plurality of ports, if the particular port is in the root port role.

3. (currently amended) The network device of claim 1, including logic to increment the a message age parameter by an amount greater than or equal to about 1/X of the a maximum age

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parameter, where X designates a value twice a maximum number plus one of protocol entities traversed by messages in the network.

4. (currently amended) The network device of claim 1, including logic to increment ~~the~~ a message age parameter by an amount greater than or equal to about 1/16 of ~~the~~ a maximum age parameter.

5. (currently amended) The network device of claim 1, including logic to increment ~~the~~ a message age parameter by an amount greater than or equal to about 1/8 of ~~the~~ a maximum age parameter.

6. (original) The network device of claim 1, including resources to propagate a configuration message in response to a change in the configuration information caused by a configuration message received on a port in the root port role either before or after the change, on ports in the plurality of ports which are in the designated port role after the change.

7. (original) The network device of claim 1, including resources to propagate a configuration message in response to a change in the configuration information on all ports in the plurality of ports, if the device identifies itself as the root of the network after the change.

8. (original) The network device of claim 1, wherein the configuration messages have a format specified according to a standard spanning tree algorithm for media access control bridges.

9. (original) The network device of claim 1, wherein said logic accepts configuration messages received from said port on the neighboring protocol entity, whether or not the configuration messages are originated by the root of the network.

10. (original) The network device of claim 1, wherein said logic to compute states is responsive to the roles indicated in said parameters.